

Rec 11/10/92

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737



October 30, 1992

CERTIFIED MAIL

Sherry J. Hanen
Director, Health & Safety
SRI International
333 Ravenswood Ave.
Menlo Park, California 94025

Dear Ms. Hanen:

SRI INTERNATIONAL, CORRAL HOLLOW EXPERIMENTAL SITE, CORRAL HOLLOW ROAD, EPA I.D. NO. CAD 980883847

We have received the engineer's certification that your facility has been closed in accordance with your approved closure plan. This letter is your acknowledgement that the Department now considers the Corral Hollow Experimental Site hazardous waste open detonation facility, EPA i.D. No. CAD 980883847 officially closed.

Please be advised that this acknowledgement of facility closure is not a certification that your facility does not pose any environmental or public health threat. This letter does not remove any liabilities associated with the past hazardous waste management practices which occurred on the site.

If you have any questions or comments, please contact Patricia Payne at (510) 540-3872.

Sincerely,

Patricia Barni

Patricia Barni
Acting Chief
Surveillance & Enforcement Branch

Cert. Mail No.: P 659 117 990

cc: See next page



Ms. Sherry J. Hanen
October 30, 1992
Page Two

cc: Mr. Kevin James
Office of the Attorney General
350 McAllister Street
San Francisco, California 94102

Mr. Nahid Zoueshtiugh, H-3-3
U.S. EPA Region IX
75 Hawthorne Street
San Francisco, California 94102

Mr. Sal Ciriello
Department of Toxic Substances Control
Facility Permitting Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710

Ms. Pat Payne
Department of Toxic Substances Control
Surveillance & Enforcement Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710

Ms. Karen Toth
Department of Toxic Substances Control
Facility Permitting Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710

Ms. Chris Lopez
Department of Toxic Substances Control
Facility Permitting Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710



CERTIFIED MAIL

December 3, 1990

Patricia Payne
Senior Hazardous Material Specialist
Region 2
Toxic Substances Control Program
2151 Berkeley Way, Annex 9
Berkeley, CA 94704

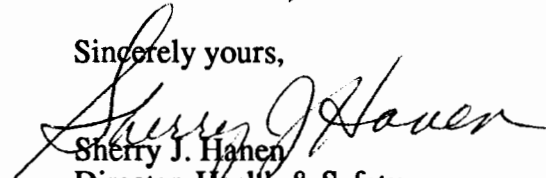
Dear Ms. Payne:

Per our telephone conversation 20 November, we would offer the following additional information for EPA consideration:

The "odd-shaped "pieces of explosives that we have been referencing over the course of correspondence are those parts of a sheet of solid explosive that remain after any section has been cut out. Generally, we take a sheet of explosive material and cut the size, shape and amount of material needed for a specific experiment. The remainder of the sheet is otherwise unaltered and can be used for other purposes. We do use that material to perform additional experiments. The amount will vary according to the exact nature of the work, but generally, our experiments run between 2 and 50 pounds of explosive material each. The research in which we have been engaged recently includes close-in blast measurements for military tank design, lethality criteria for satellites and missiles, and the use of conventional explosives to simulate nuclear blast pressure on model structures. The experiments use the explosives as a means to generate the stress and pressure which we need to measure. Our work is done for a variety of clients, both government and commercial. We carry out about 90 detonations (average for 1989-90) each year.

Please let us know if this information is sufficient to finally put this issue to rest and to complete the terms of our Consent Decree. We would appreciate your timely response (within 30 days of the date of this letter).

Sincerely yours,


Sherry J. Hansen
Director, Health & Safety

SRI International

333 Ravenswood Ave. • Menlo Park, CA 94025 • (415) 326-6200 • TWX: 910-373-2046 • Telex: 334486 • Facsimile: (415) 326-5512

cc: Jim Breitlow, Section Chief
Permits Section
Environmental Protection Agency, Region 9
H-3-2
75 Hawthorne Street
San Francisco, CA 94105

Mike Shepard
Toxic Legal Office
P.O. Box 942732
Sacramento, CA 94234-7320

Kevin James
Deputy Attorney General
Department of Justice
2101 Webster Street - 12th Floor
Oakland, CA 94612-3049

Sarah Picker
Toxic Substances Control Program
Region 2
700 Heinze Avenue, Bldg. F
Berkeley, CA 94710



CERTIFIED MAIL

November 9, 1990

Patricia Payne
Senior Hazardous Material Specialist
Region 2
Toxic Substances Control Program
2151 Berkeley Way, Annex 9
Berkeley, CA 94704

Dear Ms. Payne:

In response to your letter of 26 October, we present the following information:

1. Our closure plan was originally submitted with documentation at a meeting with DOHS personnel on February 19, 1988. We have subsequently revised it a number of times and have responded to specific questions raised by a variety of DOHS staff. Only the most recent iteration was submitted in August of this year. At that time, we responded specifically to a few issues raised by you and Mr. Lanphar.
2. You have indicated that the EPA does not accept our "practice of expending scrap explosives in training, demonstration, and/or research as a suitable substitute for actual closure of your thermal treatment facility." The point is that we no longer accumulate scrap explosives. We retain the odd shaped pieces of solid explosives in our raw material inventory and use them in operations commonly performed at the site. These include training, demonstration, and our basic research activities.
3. We do not detonate "scrap" explosives merely for the sake of eliminating these materials.
4. Training is performed as required by government regulations regarding the use of explosives. We are monitored in these activities by DCASMA on a quarterly basis. All of our training is appropriately documented. In the past two years we have not had occasion to use an actual detonation in the course of our training, although we would be happy to show you examples of the training records that we do keep.
5. We have used odd-shaped explosive pieces in performance of research operations, our use of these materials is not regulated by the EPA.
6. We have had one occasion in the past two years to perform a detonation as a demonstration. This was done in conjunction with Lawrence Livermore Labs and Physics International. There were no observers on our site. The detonation was performed solely for the purpose of demonstrating the sound level of these activities. It was an issue of concern to a local developer. If needed, the records of this event will be made available to you. We did not use any of the odd shaped pieces of explosives for this event, we used new, raw materials from our inventory. This demonstration was done in 1989.


SRI International

333 Ravenswood Ave. • Menlo Park, CA 94025 • (415) 326-6200 • TWX: 910-373-2046 • Telex: 334486 • Facsimile: (415) 326-5512

We would reiterate that we are not closing our research facility. We continue to use this site for a variety of research operations which have occasion to use explosive materials. We do not manufacture, treat, or dispose of any hazardous materials at this site and we never have. We understand that the EPA does not consider detonation or open burning to be disposal and thus would not even regulate this activity if it were being performed. Further, the small quantity exemption would apply to us based on our past records as were given to the DOHS between 1986 and 1990.

Please let us know if this information is sufficient to finally put this issue to rest and to complete the terms of our Consent Decree. We would appreciate your timely response (within 30 days of the date of this letter).

Sincerely yours,



Sherry J. Hanen
Director, Health & Safety

cc: Jim Breitlow, Section Chief
Permits Section
Environmental Protection Agency, Region 9
H-3-2
75 Hawthorne Street
San Francisco, CA 94105

Mike Shepard
Toxic Legal Office
P.O. Box 942732
Sacramento, CA 94234-7320

Kevin James
Deputy Attorney General
Department of Justice
2101 Webster Street - 12th Floor
Oakland, CA 94612-3049

Sarah Picker
Toxic Substances Control Program
Region 2
700 Heinze Avenue, Bldg. F
Berkeley, CA 94710

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM
2151 BERKELEY WAY, ANNEX 9
BERKELEY, CA 94704

October 26, 1990



Sherry J. Hanen
Director, Health and Safety
SRI International
Corral Hollow Experiment Site
333 Ravenswood Avenue
Menlo Park, CA 94025

Dear Ms. Hanen:

The Department of Health Services (Department) is in the process of reviewing your closure plan submitted August 29, 1990. The Environmental Protection Agency (EPA) is also involved in the review and approval of your closure plan. Currently, EPA does not accept your practice of expending scrap explosives in training, demonstration, and/or research operations as a suitable substitute for actual closure of your thermal treatment facility.

Additional material from SRI is necessary before the Department can approve the closure plan with EPA concurrence. The following information must be submitted to the Department:

- o The type of training, demonstration, and/or research operations scrap explosive material will be detonated.
- o The frequency of detonations and the quantity of scrap explosives detonated.
- o Descriptions of the personnel, including the number, that will be attending training and demonstrations.

According to your closure plan, this process has taken place since April 4, 1988. Any records or schedules of training, demonstration, and or research detonation of scrap explosives may assist us in our review.

Sincerely,

A handwritten signature in cursive script that reads 'Patricia Payne'.

Patricia Payne
Senior Hazardous Material
Specialist
Region 2
Toxic Substances Control Program

cc: See Attached List

Ms. Sherry Hanen

Page 2

October 26, 1990

cc: Geoffrey Steel, General
Counsel
S.R.I. International
333 Ravenswood Avenue
Menlo Park, CA 94025

✓ Jim Breitlow, Section Chief
Permits Section
Environmental Protection Agency, Region 9
H-3-2
75 Hawthorne Street
San Francisco, CA 94105

Mike Shepard
Toxic Legal Office
P.O. Box 942732
Sacramento, CA 94234-7320

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM
2151 BERKELEY WAY, ANNEX 9
BERKELEY, CA 94704



Nahid Zoueshtiugh
Environmental Protection Agency
H-3-3
1235 Mission St.
San Francisco, CA 94102

September 25, 1990

Dear Ms. Zoueshtiugh:

As per our conversation I am sending you a copy of SRI's closure plan. According to SRI they have never detonated over 100 kg. of scrap explosive in any month. Thank you for your comments. If you have any questions or other comments please call me at 540-3884.

Sincerely,

A handwritten signature in cursive script that reads 'Thomas P. Lanphar'.

Thomas P. Lanphar
Hazardous Material Specialist



August 29, 1990

RECEIVED
DEPT. OF HEALTH SERVICES
#11
90 SEP -5 AM 8:32

CERTIFIED MAIL

Thomas P. Lanphar, Hazardous Material Specialist
Patricia Payne, Senior Hazardous Material Specialist
Region 2
Toxic Substances Control Program
Department of Health Services
700 Heinz Avenue, Bldg. F
Berkeley, CA 94710

Dear Sir and Madam:

The following closure plan is submitted in fulfillment of Article 3.0 of the Consent Agreement and Order between the State of California, Department of Health Services, and SRI International relative to SRI's Corral Hollow explosive test site. The submission of this plan is in no way an admission that SRI has in fact engaged in the treatment of hazardous waste at its Corral Hollow facility. As you are aware, we are documenting the termination of our practice of disposing of small, odd-shaped pieces of solid explosives by detonating them (the State has classified this as "thermal treatment"). We will continue to use the site for research activities and do not anticipate closure of the research facility.

CLOSURE PLAN

Facility Name: Corral Hollow Experimental Site
Address: Corral Hollow Road
Tracy, CA 95376

EPA No.: CAD 980883847

Facility Mailing Address: SRI International
333 Ravenswood Avenue, Bldg. 200
Menlo Park, CA 94025

Procedure to be changed: Thermal treatment operation

Previous Use: Detonation had been used to eliminate odd-shaped pieces of solid explosive material. We ceased using this procedure on April 4, 1988; all explosive material is expended in research operations. No further hazardous "waste" has been generated since that date.

SRI International

Materials: Pentaerythritol tetranitrate (PETN)
Cyclotrimethylene trinitramine (RDX) (see Hazardous Component Safety Data sheet attached.) Note, we have not purchased RDX in over 20 years.
Kimwipes ® - laboratory paper towelettes. Kimwipes do not self-ignite.

Both chemicals are EPA Waste No. D003 and California Waste Code 352.

Closure: In order to effect closure, we have stopped setting aside odd-shaped products for detonation. We will expend all such material in research operations. No waste now exists in our inventory and none will accrue.

The following outline conforms to Form I.A.1.b. (pg. 65):

- A. 1. The Corral Hollow facility as a whole is not being closed. Only the practice of disposing of small, odd-shaped pieces of explosives by detonating them is being permanently discontinued. In all other respects, the facility will continue to function as SRI's remote explosive test site. The cessation of that disposal practice actually was effective as of April 1988.

Because the disposal method used was detonation, there is no equipment, machinery or apparatus to have become contaminated. No decontamination is required (Sections 67260, 67524, Title 22, CCR).

2. The entire facility (note: "facility" refers to the entire test site) remains open and active. Area 2 (see map attached) will continue to be used for research purposes. Area 2 is near the center of SRI's 480 acres in San Joaquin County. The site is hilly, encompassing 1400-1800-ft. elevations. Area 2 is a small ravine running NE to SW; it is approximately 150 ft. below the nearest high point (about 1600 ft). The ravine is accessed by a foot trail from the area near Bunker 2 or by dirt road. The area is dry, containing little brush and sparse oak (*Quercus californica*) trees and some grass. The ravine is not more than 20 ft. wide at its narrowest point. The entire site is wholly enclosed by a cattle exclusion fence with locked gates.
3. Not applicable.
4. a. Hazardous waste: Any hazardous waste material would be collected in labelled, secure containers and handed over to a licensed contractor for appropriate disposal.
- b. Hazardous waste constituents: As above.
- c. Leachate: Our materials at this site are solid; no leachate is expected.

- d. Contaminated rainfall: We have no reason to expect that rainfall would become contaminated.
 - e. Waste decomposition products: All waste is collected in secure containers and removed before any decomposition could occur.
5. When the disposal of small pieces of explosives by detonation was being practiced, the maximum accumulation at any one time was 36 pounds.
6. No equipment is contaminated or requires decontamination.
7. Schedule for closure:
- a. Waste is not now, nor will be, received at this facility.
 - b. Our termination of the "thermal treatment" procedure was effective as noted in our letter of May 6, 1988, with the adoption of new operating procedures.
 - c. Not applicable.
 - d. Detailed closure schedule information follows: In order to identify whether or not significantly elevated levels of hazardous materials are present in the area in which open air detonation occurred, we will take soil samples for analysis. We plan to sample the area in which detonations have occurred and an area(s) where none has occurred to give us a reasonable comparison with background elements already in the soil. We will select elements for analysis based on knowledge of the composition of the products detonated. We expect to take six soil samples, three from a detonation area and three from background areas. The samples will be taken in the presence of an authorized representative of the Toxic Substances Control Division. All samples will be within the top four inches of soil. The samples will be analyzed by a certified Hazardous Waste Testing Laboratory as identified in the listing from the Hazardous Materials Laboratory Section of the California Department of Health Services (Sections 67316, 67351, Title 22, CCR).

If the results of the soil sampling described in the preceding paragraph indicate that contamination has occurred, and if it were determined that leaving such soil would constitute a significant hazard, then the test area soil would be removed as hazardous waste. Decontamination would be effected by removal of the soil.

Test area 10' diameter x 4" deep = 26.2 cu. ft.
@ 1 cu. ft. = 7.5 gal.
then, a 55-gal. drum holds 7.3 cu. ft.
then, 4 drums will be required to contain 26.2 cu. ft.

The shovels used to move the soil into the drums would be decontaminated with cleanser and the cleaning supplies would be discarded with the drums (Section 67214, Title 22, CCR).

For the most part, the provisions of Section 67378 are not applicable to our facility. To the extent that soil contamination is concerned, the above paragraphs satisfy Section 67378, Title 22, CCR).

Section 67418, Title 22, CCR applies only to landfills and is therefore not applicable.

Section 67468, Title 22, CCR, in dealing with incinerators, is not applicable to our site.

8. As we are not actually closing the facility but only changing procedures, the costs detailed below relate to soil sampling to establish that ground contamination has not occurred in the past and to establish the current background levels of common soil constituents.

Background samples (in three areas on the site) for metals	3 x \$355.00	=	\$ 1065.00
Site samples (in one area, three samples) for metals	3 x 355.00	=	<u>1065.00</u>
			\$2130.00
Site and background samples for nitrites and nitrates	6 x 42.00	=	252.00
Report of an independent registered engineer			<u>750.00</u>
	Total		\$3132.00

(Intended sample locations are indicated on the attached map of Area 2)

Should soil contamination be found, additional costs for soil removal would include:

\$120/drum x 4 drums	=	480.00
\$1/mile for pick-up (120 mi. R/T)	=	120.00
5 hours/team x \$100/hour	=	<u>500.00</u>

Adding to above, New Total = \$4232.00

In addition, if soil removal were necessary, we would also resample in the removal area to confirm that all contamination had been removed. The cost would be calculated the same as for the original sampling (i.e., $3 \times \$355 = \1065.00). This sum would be added to the previous total of \$4232. Thus, the final total would be \$5297.

- B. Should further changes occur in the facility's operation or physical design, we assure that the closure plan will be properly amended and the Department notified within 60 days of the Amendment (Section 67218 (b), Title 22, CCR).
- C. DOHS was notified of our intentions in a meeting on February 19, 1983, and notified in writing on May 6, 1988. This document completes our documentation process.
- D.
 - 1. Container storage areas: As previously described, we are only changing procedures; we do not plan to remove any equipment at this time.
 - 2. Tanks: See above.
- E. As noted in (A.8) above, we plan to sample and analyze soil samples representing both background and site areas in order to determine whether any change has occurred in the soil as a result of our operations. Once the results of the analyses are available, we will take whatever actions are appropriate to ensure that the site is not contaminated. This may involve removal of soil or implementation of other decontamination procedures. We believe that this is very unlikely, especially since the sample previously taken by DOHS revealed no contamination in the site area.

Sampling and analysis will be done according to the indicated methods described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. Environmental Protection Agency. The analyses will be performed by a laboratory certified by the Department of Health Services for soil analysis. Soil contamination will be determined according to the concentration found in the soil relative to their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) values and acknowledged health relevance. In addition to testing for nitrites and nitrates, we will test for the seventeen metals on the List of Inorganic Persistent and Bioaccumulative Toxic Substances (Section 66699, Title 22, CCR).

Section 67213, Title 22, CCR, Closure: Time Allowed for Closure. Since the practice of detonating "waste" explosive pieces has already ceased, the remainder of the closure schedule involves only the sampling and follow-through. Our estimate for these activities is:

Sampling will be Day One;

Sampling analysis will be three weeks;

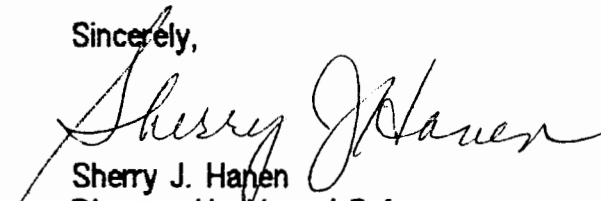
If samples show no contamination, closure will be complete upon receipt of the engineer's report, approximately six weeks after the sampling date.

If the samples show that soil removal is required, an additional three weeks would be added to the schedule. This would allow time for soil removal to drums, drum removal and transport to an approved hazardous waste disposal facility. The total schedule would then be nine weeks from the start date.

- F. Upon completion of the soil sampling, analysis, and decontamination, as necessary, we will secure the report of an independent California-registered engineer to certify that the site has been closed in accordance with the specifications of the closure plan (Section 67215, Title 22, CCR).

This should complete the closure requirements in accordance with Sections 67212-67215 of the California Code of Regulations, Title 22. We will expect your review of this plan and comments and/or approval in order to allow for an expedient conclusion to this matter. Please do not hesitate to call should you have questions requiring additional information.

Sincerely,



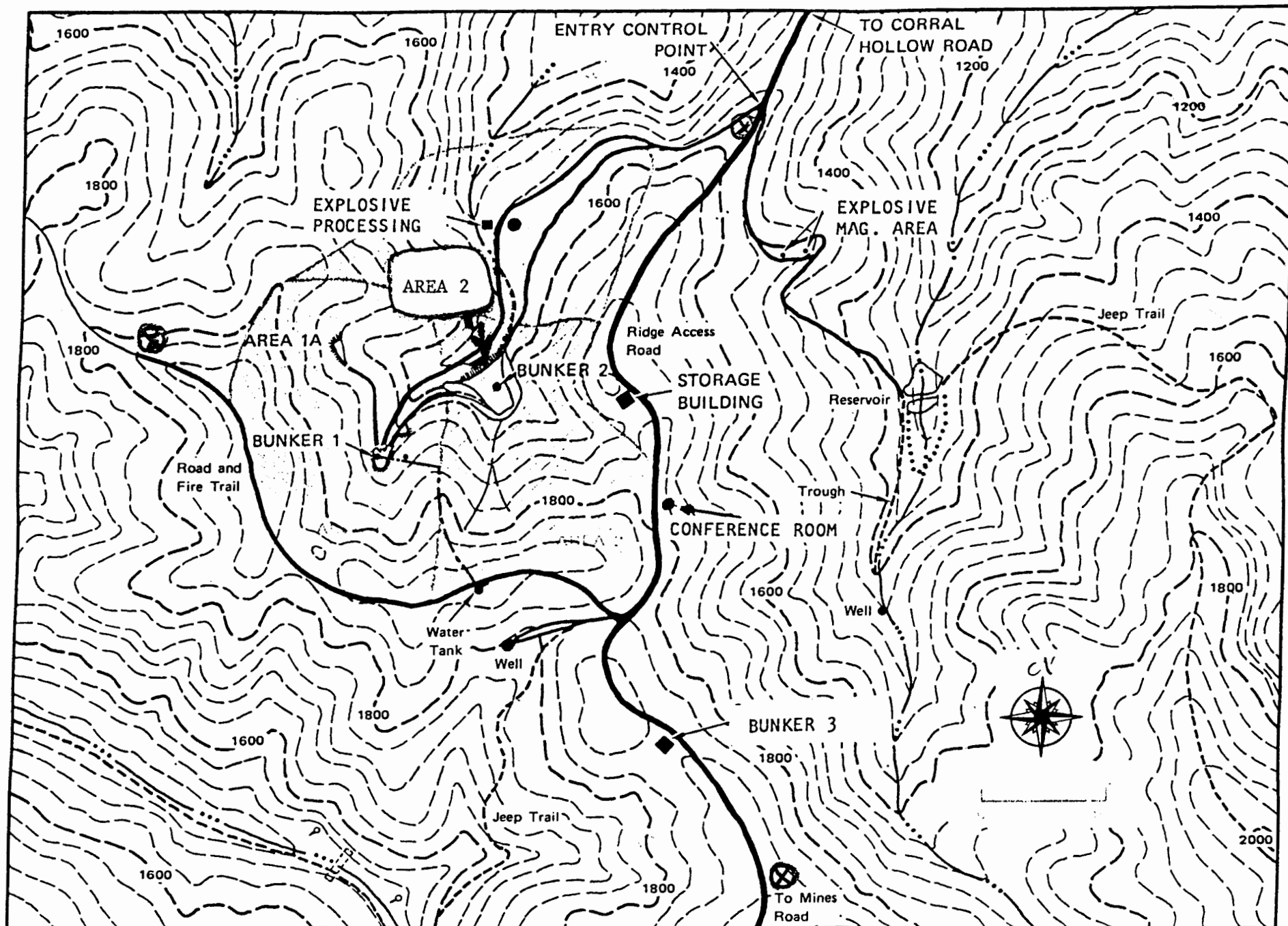
Sherry J. Hanen
Director, Health and Safety

Attachments: Cyclotrimethylene trinitramine, Hazardous Component Safety Data Sheet
Map of Area 2 with sample locations marked

cc: Sarah Picker
Toxic Substances Control Program
Region 2
700 Heinz Avenue, Bldg. F
Berkeley, CA 94710



CORRAL HOLLOW EXPERIMENTAL SITE



MAP OF AREA 2 SOIL SAMPLING LOCATIONS

EPA I.D. CAD 980883847

CLOSURE PLAN CHECKLIST
~~CONTAINER STORAGE AND HANDLING UNITS~~

open detonation

SUBJECT REQUIREMENT	PART 264/265	PROVIDED	NOI APPLICABLE	COMMENTS
1. FACILITY DESCRIPTION	264.111/265.111			
1.1 General description (e.g., size, location)		✓		
1.2 Topographic map		✓		
1.3 List of other HWM units and wastes handled in each			✓	no other units
1.4 Hydrogeologic information:				
o Ground-water and soil conditions		✓		
o Ground-water monitoring systems			✓	
o Corrective actions			✓	
1.5 Container storage unit description:				
o Wastes managed (EPA hazardous waste numbers & quantities)			✓	ob od, no storage:
o Capacity: number and size of containers			✓	in containers
o Storage area design & ancillary equipment (including layout sketch)			✓	
o Secondary containment design			✓	
1.6 References to other environmental permits (NPDES, UIC, TSCA)			✓	no other permits
1.7 Anticipated waivers or exemptions			✓	
2. CLOSURE PROCEDURES				
2.1 Estimates of maximum quantity of inventory (by waste type) to be removed:	264.112(b)(3)/265.112(b)(3); 264.178			
o Containers			✓	OBOD
o Bulk wastes			✓	"
o Residues			✓	"
o Empty containers			✓	"

JANUARY 1987 DRAFT

INCORPORATED

OSWER Policy Directive
#9476.00-5

CLOSURE PLAN CHECKLIST
CONTAINER STORAGE AND HANDLING UNITS

EPA I.D. _____

SUBJECT REQUIREMENT

PART 264/265

PROVIDED APPLICABLE

NOT

COMMENTS

2.2 Procedures for handling removed inventory (address quantities, waste types, methods):

264.112(b)(3)/265.112(b)(3);
264.170

- ☐ On-site treatment
- ☐ On-site disposal
- ☐ Transportation distance off-site
- ☐ Off-site treatment
- ☐ Off-site disposal

✓
✓
✓
✓
✓
No inventory

2.3 Procedures for decontamination and/or disposal:

264.112(b)(4)/265.112(b)(4);
264.114/265.114; 264.170

- ☐ Equipment/structures decontamination (address sampling protocol)
- ☐ Cleaning agent/rinsewater treatment or disposal (address quantities, waste types, and methods):
- ☐ On-site treatment/disposal
- ☐ Off-site treatment/disposal
- ☐ Equipment/structures demolition and removal (address quantities and methods):
- ☐ On-site treatment/disposal
- ☐ Off-site treatment/disposal
- ☐ Contaminated soil removal:
- ☐ List or sketch of potentially contaminated areas
- ☐ Estimated amount of contaminated soil to be removed (address sampling protocol)
- ☐ Soil removal methods
- ☐ On-site disposal
- ☐ Off-site disposal

✓
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JANUARY 1987 DRAFT

ICF INCORPORATED

**CLOSURE PLAN CHECKLIST
CONTAINER STORAGE AND HANDLING UNITS**

LPA I.D. _____

SUBJECT REQUIREMENT	PART 264/265	PROVIDED	NOT APPLICABLE	COMMENTS
2.4 Description of security systems:	264.14(b) and (c)/ 265.14(b) and (c)			
o Posted signs and 24-hour surveillance system		✓		
o fence or natural barrier		✓		
2.5 Closure certification:	264.115/265.115			
o Activities to be conducted		✓		
o Testing and analyses to be performed		✓		
o Criteria for evaluating adequacy		✓		
o Schedule of inspections		✓		
o Types of documentation		✓		
3. CLOSURE SCHEDULE	264.112(b)(6)/265.112(b)(6)			
3.1 Expected year of closure	264.112(b)(7)/265.112(b)(7)	✓		
3.2 Frequency of partial closures			✓	
3.3 Milestone chart showing time for:				
o Removal, treatment or disposal of inventory	264.113(a)/265.113(a)		✓	no inventory
o Decontamination equipment/structures			✓	no eq. or struct.
o Equipment, structures demolition and soil removal/disposal		✓		
o Total time to close	264.113(b)/265.113(b)	✓		
3.4 Request for extension to deadlines for handling inventory or completing closure	264.113(c)/265.113(c)		✓	

JANUARY 1987 DRAFT

ICF INCORPORATED

OSWER Policy Directive
#9476.00-5

SRI CLOSURE PLAN CHRONOLOGY

November 17, 1983: Part A application sent to U.S. EPA.

November 8, 1985: California Department of Health Services (DHS) request SRI's Hazardous Waste Facility Operation Plan. SRI was never issued a permit or given an Interim Status Document.

September 16, 1987: SRI inspected by DHS. Eight violations recorded in inspection report dated October 13, 1987.

January 6, 1988: SRI inspected by DHS. Seven violations observed.

January 12, 1989: SRI submits closure plan to DHS.

January 20, 1989: SRI submits new closure plan after telephone comments by DHS.

March 6, 1989: Consent Agreement and Order issued. Order requires SRI to submit closure plan. Order allows SRI to detonate, solely for demonstration and training purposes, all scrap explosives it produces as by-products of the test explosions conducted at Corral Hollow.

July 31, 1990: DHS issues notice of deficiency on closure plan.

August 29, 1990: SRI submits new closure plan.

October 29, 1990: DHS sends letter to SRI asking for more information as to how scrap explosives are used in testing, research, and demonstrations.

November 9, 1990: SRI responds to October letter stating that since ceasing detonating scrap explosives as hazardous waste, they have used odd shaped explosives in research operations only.

February 13, 1991: Meeting between Tom Lanphar (DHS) and Nahid Zoueshtiugh to discuss issues of SRI's closure plan.

August 30 and September 3, 1991: SRI inspected by Tom Lanphar of California Department of Toxic Substances Control.

January 15, 1992: SRI's closure plan public noticed published in Livermore Independent.

January 16, 1992: SRI's closure plan public noticed published in Tracy Press.

February 18, 1992: Public comment period closes. No comments submitted. Public hearing not requested or held.



**NOTICE OF
PUBLIC COMMENT PERIOD
ON DRAFT PROPOSED CLOSURE PLAN
AND NEGATIVE DECLARATION
OF HAZARDOUS WASTE FACILITY**

The California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control and Region 9 office of the United States Environmental Protection Agency (U.S. EPA) wishes to inform you and request public comment on a Closure Plan for an open detonation unit at Stanford Research Institute (SRI), Corral Hollow Experimental Site, located 12 miles southwest of Tracy on Corral Hollow Road in San Joaquin County. The Cal-EPA also request public comment on the proposed Negative Declaration for the project as defined under the California Environmental Quality Act. If approved the Closure Plan would define the steps which SRI will complete to meet requirements to close a thermal treatment unit under the Resource Conservation and Recovery Act 42 USC, Sec. 6901, et. seq. 40 Code of Federal Regulations, Part 265, Subpart G; and the California Code of Regulations Title 22, Article 7.

The unit was used to dispose of odd-shaped pieces of solid explosive hazardous waste by detonation. SRI conducts detonation of explosives for research. The odd-shaped pieces are left over scrap from the facility's normal explosion test operations. According to SRI, disposal of its hazardous waste in that manner stopped in April 1988. Since that time all explosive material has been expended in research operations.

The full Administrative Record pertaining to this matter is available for review at:

**California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710
Contact: Tom Lanphar
(510) 540-3884**

The proposed Closure Plan is available for public inspection and copying at:

**Tracy Public Library
Reference Desk
20 East Eaton
Tracy, California 95376
(209) 835-2221**

Oral and written comments on the Closure Plan and proposed Negative Declaration will be accepted for 30 days from the date of this notice and may be sent to Cal-EPA at the above address.

A public hearing will be held if there is a significant degree of public interest. Requests for a public hearing, including the issues to be raised, must be submitted in writing to Cal-EPA. Written request for a public hearing must be received by February 18, 1991. If a public hearing is held, Cal-EPA and U.S. EPA will give 30 days prior notice to the public. Written and oral comments will be accepted at the hearing.

At the close of the comment period, Cal-EPA and U.S. EPA will make the final decision after considering all comments. The public repositories will contain a record of the decision and the comments received. All commentators will be notified of the decision.

Attention: Tom Lanphar
Department of Toxic Substances Control
Region 2
700 Heinz Avenue, Suite 200
Berkeley, California 94710

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
700 HEINZ AVENUE, SUITE 200
BERKELEY, CALIFORNIA 94710



Fact Sheet

SRI International, Corral Hollow Experimental Site Closure of Hazardous Waste Open Air Detonation Unit

Introduction

This fact sheet describes facility operations and closure activities at Stanford Research Institute (SRI), International, Corral Hollow Experiment Site (CHES). SRI has ceased operating and is proposing to formally close its hazardous waste open detonation area. The U.S. Environmental Protection Agency (EPA) and the California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control must review and either approve or modify the closure plan submitted by SRI. In addition, Cal-EPA proposes to issue a Negative Declaration on the closure project in accordance with the California Environmental Quality Act (CEQA). Cal-EPA finds there is no potential for significant effect to the environment from the closure. Cal-EPA is asking for comments from the public on SRI's Closure Plan and on the proposed Negative Declaration.

Background

The facility is located on Corral Hollow Road, adjacent to the Carnegie State Vehicular Recreation Area (see location map). SRI is situated in a rugged isolated area near the Alameda County, San Joaquin County line and is approximately 12 miles southwest of the City of Tracy and 15 miles southeast of the City of Livermore. The nearest residences are roughly five miles from the active portion of the facility.

Facility Description

SRI, CHES is an explosive research facility and has been in existence since 1965. SRI conducts explosive test at several areas at the site. SRI uses the explosive pentaerythritol tetranitrate (PETN) in their experiments. Odd shaped scrap explosive material is produced when small amounts (50 to 100 grams) of sheet material is cut off the test piece. Up until 1988, SRI eliminated left over scrap explosives through detonation. This occurred at a site near Area 2. Soil from this location was tested in 1987. No contamination was found at that time.

SRI has altered their process and currently all explosive material, including odd shaped material, is expended in research operations. The odd shape pieces are now used in training and experiments not requiring specific shapes.

Closure of the open detonation treatment site near Area No. 2 involves ceasing the storage and elimination of scrap explosive waste through detonation. SRI will expend all material in research operations. SRI will continue to use Area No. 2 for research activities. In order to determine if elevated levels of hazardous materials are present in the area in which open air detonation occurred, soil samples will be taken from the detonation area. Samples will also be taken from outside the area to establish levels of background elements already in the soil. Should soil contamination be found, the contaminated soil will be excavated and disposed of as a hazardous waste.

Upon completion of the soil sampling, analysis and decontamination as necessary, a report of an independent California-registered engineer is required to certify that the site has been closed in accordance with the specifications of the Closure Plan.

Enforcement History

In 1987 Cal-EPA inspected SRI and observed 15 violations of California regulation. As a result of the violations SRI and Cal-EPA entered into a Consent Agreement and Order (Order) on March 6, 1989. This Order stipulates that SRI will submit a Closure Plan for the explosive site near Area 2 and close the site to the schedule set forth in the Closure Plan. The Order also stipulates that SRI will no longer treat, store, or dispose of hazardous waste following the closure of the explosive site near Area 2.

Public Participation

Before the closure plan can formally be approved, Cal-EPA encourages the public to submit relevant questions and comments on the Closure Plan and on the proposed Negative Declaration during a 30-day comment period beginning January 16, 1992. The public may also request that a public hearing be held on the proposed actions. Request for a local public hearing must be in writing and state the reason why a hearing is needed. All written comments and written requests should be sent to the California Environmental Protection Agency, Department of Toxic Substance Control in Berkeley at the address shown below.

For more information, contact Tom Lanphar, at Cal-EPA, (510) 540-3884. Any interested person may view the closure plan, Negative Declaration, and related documents at the following locations:

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

Monday - Friday
8:00 a.m. - 5:00 p.m.
(510) 540-3800

Public Repository
Tracy Public Library
20 East Eaton
Tracy, CA 95376

Monday & Friday 10a.m. - 9 p.m.
Tuesday, Wednesday, Thursday, Sunday 10 a.m. - 6 p.m.
Saturday 10 a.m. - 5 p.m.
(209) 835-2221

California Newspaper Service Bureau, Inc.

Established 1934
915 E. First Street
Los Angeles, CA 90012
(213) 229-5500

DECLARATION

I am a resident of Los Angeles County, over the age of
seventeen years and not a party to or interested in the matter
declared.

The notice, of which the annexed is a printed copy
deposited in the:

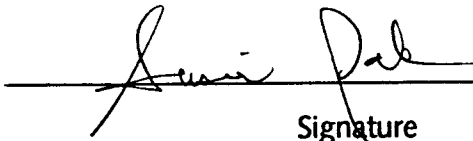
TRACY PRESS

the following dates:

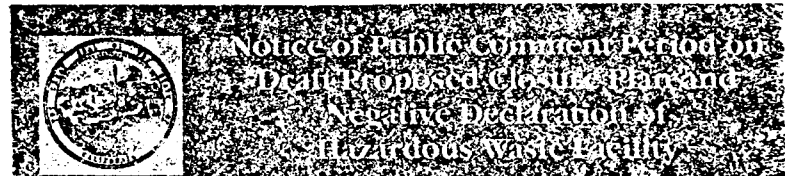
1/16. 1992

I certify (or declare) under penalty of perjury that the
abovegoing is true and correct.

Witnessed at Los Angeles, California, this 11 day of
FEBRUARY, 1992



Signature



The California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control and Region 9, office of the United States Environmental Protection Agency (U.S. EPA) wishes to inform you and request public comment on a Closure Plan for an open detonation unit at Stanford Research Institute (SRI), Corral Hollow Experimental Site, located 12 miles southwest of Tracy on Corral Hollow Road in San Joaquin County. The Cal-EPA also request public comment on the proposed Negative Declaration for the project as defined under the California Environmental Quality Act. If approved the Closure Plan would define the steps which SRI will complete to meet requirements to close a thermal treatment unit under the Resource Conservation and Recovery Act 42 USC, Sec. 6901, et. seq. 40 Code of Federal Regulations, Part 265, Subpart G; and the California Code of Regulations Title 22, Article 7.

The unit was used to dispose of odd-shaped pieces of solid explosive hazardous waste by detonation. SRI conducts detonation of explosives for research. The odd-shape pieces are left over scrap from the facility's normal explosion test operations. According to SRI, disposal of its hazardous waste in that manner stopped in April 1988. Since that time all explosive material has been expended in research operations.

The full Administrative Record pertaining to this matter is available for review at:
California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Building F
Berkeley, CA 94710
(415) 540-3884

The proposed Closure Plan is available for public inspection and copying at:

Tracy Public Library - Reference Desk
20 East Eaton
Tracy, CA 95376
(209) 835-2221

Oral and written comments on the Closure Plan and proposed Negative Declaration will be accepted for 30 days from the date of this notice and may be sent to Cal-EPA at the above address.

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At the close of the comment period, Cal-EPA and U.S. EPA will make the final decision after considering all comments. The public repositories will contain a record of the decision and the comments received. All commentors will be notified of the decision.

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Los Angeles, CA 90012
(213) 229-5500

DECLARATION

I, _____, a resident of Los Angeles County, over the age of _____ years and not a party to or interested in the matter _____

have read the notice, of which the annexed is a printed copy and in the:

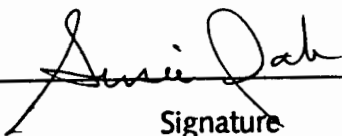
LIVERMORE INDEPENDENT

on the following dates:

1/15, 1992

I hereby (or declare) under penalty of perjury that the foregoing is true and correct.

Witness my hand at Los Angeles, California, this 12 day of FEBRUARY, 19 92


Signature



Notice of Public Comment Period on Draft Proposed Closure Plan and Negative Declaration of Hazardous Waste Facility

The California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control and Region 9 office of the United States Environmental Protection Agency (U.S. EPA) wishes to inform you and request public comment on a Closure Plan for an open detonation unit at Stanford Research Institute (SRI), Corral Hollow Experimental Site, located 12 miles southwest of Tracy on Corral Hollow Road in San Joaquin County. The Cal-EPA also request public comment on the proposed Negative Declaration for the project as defined under the California Environmental Quality Act. If approved the Closure Plan would define the steps which SRI will complete to meet requirements to close a thermal treatment unit under the Resource Conservation and Recovery Act 42 USC, Sec. 6901, et. seq. 40 Code of Federal Regulations, Part 265, Subpart G: and the California Code of Regulations Title 22, Article 7.

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Department of Toxic Substances Control
700 Heinz Avenue, Building F
Berkeley, CA 94710
(415) 540-3884

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Tracy, CA 95376
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The Hon. Dean Andal
Member of the Assembly (Dist 26)
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The Hon. Bill Sousa
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The Hon. Doug Wilhoit
Supervisor, San Joaquin County
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Supervisor, San Joaquin County
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The Hon. Edward R. Campbell
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Carol Greany
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Ron Scott
Livermore Police Chief
1052 South Livermore Avenue
Livermore, CA 94550

John C. Hines, Director
Livermore Public Works
1052 South Livermore Avenue
Livermore, CA 94550



**NOTICE OF
PUBLIC COMMENT PERIOD
ON DRAFT PROPOSED CLOSURE PLAN
AND NEGATIVE DECLARATION
OF HAZARDOUS WASTE FACILITY**

The California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control and Region 9 office of the United States Environmental Protection Agency (U.S. EPA) wishes to inform you and request public comment on a Closure Plan for an open detonation unit at Stanford Research Institute (SRI), Corral Hollow Experimental Site, located 12 miles southwest of Tracy on Corral Hollow Road in San Joaquin County. The Cal-EPA also request public comment on the proposed Negative Declaration for the project as defined under the California Environmental Quality Act. If approved the Closure Plan would define the steps which SRI will complete to meet requirements to close a thermal treatment unit under the Resource Conservation and Recovery Act 42 USC, Sec. 6901, et. seq. 40 Code of Federal Regulations, Part 265, Subpart G: and the California Code of Regulations Title 22, Article 7.

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**California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710
Contact: Tom Lanphar
(510) 540-3884**

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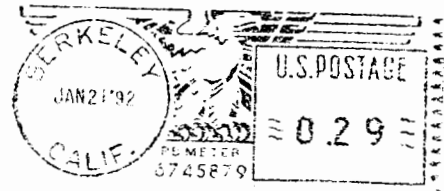
**Tracy Public Library
Reference Desk
20 East Eaton
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(209) 835-2221**

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Department of Toxic Substances Control
Region 2
700 Heinz Avenue, Suite 200
Berkeley, California 94710



Larry Bowerman
US EPA, H-2-3
75 Hawthorne Street
San Francisco, CA 94105



DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
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**CERTIFIED MAIL**

Geoffrey Steel
General Counsel
S.R.I. International
333 Ravenswood Avenue
Menlo Park, California 94025

Dear Mr. Steel:

**S.R.I. INTERNATIONAL (CORRAL HOLLOW EXPERIMENTAL SITE)
OPEN DETONATION SITE EPA ID # CAD 980 883 847**

The California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA, DTSC) and the Region IX Office of the U.S. Environmental Protection Agency (EPA) have reviewed S.R.I. International's closure plan dated August 29, 1990 for the above named facility. S.R.I. International submitted the closure plan in fulfillment of Article 3.0 of the Consent Agreement and Order (HWCA No. 87/88-0014).

Pursuant to Title 22 of the California Code of Regulations (Cal. Code Regs.), Section 66265.112 and the regulations adopted pursuant to the Resource Conservation and Recovery Act, 42 USC Section 6901, et seq, your Closure Plan is determined to be acceptable by the Cal-EPA, DTSC and the EPA, and is hereby approved.

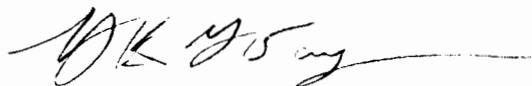
You are required to comply with the specific activities described in the approved Closure Plan as well as in U.S. Code of Federal Regulations, Title 40, Section 265.381 and Cal. Code Regs., Title 22, Section 66265.381. Upon completion of closure, the owner or operator must submit to the Department certification by both the owner or operator and by an independent, qualified professional engineer, registered in California that the facility has been closed in accordance with the specifications in the approved closure plan.



S.R.I. International
Mr. Geoffrey Steel
Page Two

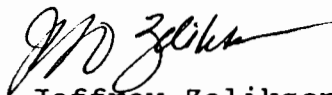
The approval of this closure plan fulfills the requirement of Article 3.1 of the Consent Agreement and Order. If you have any questions regarding this approval, you may contact Tom Lanphar of the DTSC at (510) 540-3884.

Sincerely,



Howard K. Hatayama
Regional Administrator
Region 2

Mar. 20, 1992
Date



Jeffrey Zelikson
Director
Hazardous Waste Management Division
U.S. EPA, Region IX

4-1-92
Date

Cert. Mail No. P 106 353 652

cc: Kevin James
Office of the Attorney General
350 McAllister Street
San Francisco, California 94102

Patricia Payne
Department of Toxic Substance Control
700 Heinz Ave, Suite 200
Berkeley, California 94701

Sarah Picker
Department of Toxic Substance Control
700 Heinz Ave, Suite 200
Berkeley, California 94701

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737



March 19, 1992

CERTIFIED MAIL

Mr. Lawrence Bowerman
Section Chief
Hazardous Waste Management Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Bowerman:

APPROVAL OF CLOSURE PLAN FOR STANFORD RESEARCH INSTITUTE, CORRAL HOLLOW EXPERIMENT SITE, U.S. EPA ID # CAD 980 883 847

Enclosed is the final Closure Plan approval package for Stanford Research Institute, Corral Hollow Experiment Site (SRI). SRI had operated an open detonation area under interim status. No other RCRA units are located at SRI. The closure plan was public noticed on January 15, 1992. No public comments were received and a hearing was not held. Groundwater was not affected by the open detonation. The facility does not have groundwater monitoring. The facility is in compliance with financial assurance requirements. A Compliance Schedule Tracking sheet is not included because there is no compliance to track.

I recommend that the U.S. Environmental Protection Agency approve the enclosed Closure Plan for SRI. I also certify that to the best of my knowledge, this Final Closure Plan Approval Package conforms with the RCRA regulations and guidance, is technically sound, legally enforceable, and administratively complete.

Sincerely,

A handwritten signature in dark ink, appearing to read "H. Hatayama", is written over the typed name.

Howard Hatayama
Regional Administrator
Region 2

Cert. Mail No. P 106 353 653

Enclosure





August 29, 1990

RECEIVED
DEPT. OF HEALTH SERVICES
#1
90 SEP -5 AM 8:32

CERTIFIED MAIL

Thomas P. Lanphar, Hazardous Material Specialist
Patricia Payne, Senior Hazardous Material Specialist
Region 2
Toxic Substances Control Program
Department of Health Services
700 Heinz Avenue, Bldg. F
Berkeley, CA 94710

Dear Sir and Madam:

The following closure plan is submitted in fulfillment of Article 3.0 of the Consent Agreement and Order between the State of California, Department of Health Services, and SRI International relative to SRI's Corral Hollow explosive test site. The submission of this plan is in no way an admission that SRI has in fact engaged in the treatment of hazardous waste at its Corral Hollow facility. As you are aware, we are documenting the termination of our practice of disposing of small, odd-shaped pieces of solid explosives by detonating them (the State has classified this as "thermal treatment"). We will continue to use the site for research activities and do not anticipate closure of the research facility.

CLOSURE PLAN

Facility Name: Corral Hollow Experimental Site
Address: Corral Hollow Road
Tracy, CA 95376

EPA No.: CAD 980883847

Facility Mailing Address: SRI International
333 Ravenswood Avenue, Bldg. 200
Menlo Park, CA 94025

Procedure to be changed: Thermal treatment operation

Previous Use: Detonation had been used to eliminate odd-shaped pieces of solid explosive material. We ceased using this procedure on April 4, 1988; all explosive material is expended in research operations. No further hazardous "waste" has been generated since that date.

SRI International

333 Ravenswood Ave. • Menlo Park, CA 94025 • (415) 326-6200 • TWX: 910-373-2046 • Telex: 334486 • Facsimile: (415) 326-5512

Materials: Pentaerythritol tetranitrate (PETN)
Cyclotrimethylene trinitramine (RDX) (see Hazardous Component Safety Data sheet attached.) Note, we have not purchased RDX in over 20 years.
Kimwipes ® - laboratory paper towlettes. Kimwipes do not self-ignite.

Both chemicals are EPA Waste No. D003 and California Waste Code 352.

Closure: In order to effect closure, we have stopped setting aside odd-shaped products for detonation. We will expend all such material in research operations. No waste now exists in our inventory and none will accrue.

The following outline conforms to Form I.A.1.b. (pg. 65):

- A. 1. The Corral Hollow facility as a whole is not being closed. Only the practice of disposing of small, odd-shaped pieces of explosives by detonating them is being permanently discontinued. In all other respects, the facility will continue to function as SRI's remote explosive test site. The cessation of that disposal practice actually was effective as of April 1988.

Because the disposal method used was detonation, there is no equipment, machinery or apparatus to have become contaminated. No decontamination is required (Sections 67260, 67524, Title 22, CCR).

2. The entire facility (note: "facility" refers to the entire test site) remains open and active. Area 2 (see map attached) will continue to be used for research purposes. Area 2 is near the center of SRI's 480 acres in San Joaquin County. The site is hilly, encompassing 1400-1800-ft. elevations. Area 2 is a small ravine running NE to SW; it is approximately 150 ft. below the nearest high point (about 1600 ft). The ravine is accessed by a foot trail from the area near Bunker 2 or by dirt road. The area is dry, containing little brush and sparse oak (*Quercus californica*) trees and some grass. The ravine is not more than 20 ft. wide at its narrowest point. The entire site is wholly enclosed by a cattle exclusion fence with locked gates.
3. Not applicable.
4. a. Hazardous waste: Any hazardous waste material would be collected in labelled, secure containers and handed over to a licensed contractor for appropriate disposal.
- b. Hazardous waste constituents: As above.
- c. Leachate: Our materials at this site are solid; no leachate is expected.

The shovels used to move the soil into the drums would be decontaminated with cleanser and the cleaning supplies would be discarded with the drums (Section 67214, Title 22, CCR).

For the most part, the provisions of Section 67378 are not applicable to our facility. To the extent that soil contamination is concerned, the above paragraphs satisfy Section 67378, Title 22, CCR).

Section 67418, Title 22, CCR applies only to landfills and is therefore not applicable.

Section 67468, Title 22, CCR, in dealing with incinerators, is not applicable to our site.

8. As we are not actually closing the facility but only changing procedures, the costs detailed below relate to soil sampling to establish that ground contamination has not occurred in the past and to establish the current background levels of common soil constituents.

Background samples (in three areas on the site) for metals	3 x \$355.00	=	\$ 1065.00
Site samples (in one area, three samples) for metals	3 x 355.00	=	<u>1065.00</u>
			\$2130.00
Site and background samples for nitrites and nitrates	6 x 42.00	=	252.00
Report of an independent registered engineer			<u>750.00</u>
	Total		\$3132.00

(Intended sample locations are indicated on the attached map of Area 2)

Should soil contamination be found, additional costs for soil removal would include:

\$120/drum x 4 drums	=	480.00
\$1/mile for pick-up (120 mi. R/T)	=	120.00
5 hours/team x \$100/hour	=	<u>500.00</u>

Adding to above,	New Total	=	\$4232.00
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In addition, if soil removal were necessary, we would also resample in the removal area to confirm that all contamination had been removed. The cost would be calculated the same as for the original sampling (i.e., 3 x \$355 = \$1065.00). This sum would be added to the previous total of \$4232. Thus, the final total would be \$5297.

- B. Should further changes occur in the facility's operation or physical design, we assure that the closure plan will be properly amended and the Department notified within 60 days of the Amendment (Section 67218 (b), Title 22, CCR).
- C. DOHS was notified of our intentions in a meeting on February 19, 1983, and notified in writing on May 6, 1988. This document completes our documentation process.
- D.
 - 1. Container storage areas: As previously described, we are only changing procedures; we do not plan to remove any equipment at this time.
 - 2. Tanks: See above.
- E. As noted in (A.8) above, we plan to sample and analyze soil samples representing both background and site areas in order to determine whether any change has occurred in the soil as a result of our operations. Once the results of the analyses are available, we will take whatever actions are appropriate to ensure that the site is not contaminated. This may involve removal of soil or implementation of other decontamination procedures. We believe that this is very unlikely, especially since the sample previously taken by DOHS revealed no contamination in the site area.

Sampling and analysis will be done according to the indicated methods described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. Environmental Protection Agency. The analyses will be performed by a laboratory certified by the Department of Health Services for soil analysis. Soil contamination will be determined according to the concentration found in the soil relative to their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) values and acknowledged health relevance. In addition to testing for nitrites and nitrates, we will test for the seventeen metals on the List of Inorganic Persistent and Bioaccumulative Toxic Substances (Section 66699, Title 22, CCR).

Section 67213, Title 22, CCR, Closure: Time Allowed for Closure. Since the practice of detonating "waste" explosive pieces has already ceased, the remainder of the closure schedule involves only the sampling and follow-through. Our estimate for these activities is:

Sampling will be Day One;

Sampling analysis will be three weeks;

If samples show no contamination, closure will be complete upon receipt of the engineer's report, approximately six weeks after the sampling date.

If the samples show that soil removal is required, an additional three weeks would be added to the schedule. This would allow time for soil removal to drums, drum removal and transport to an approved hazardous waste disposal facility. The total schedule would then be nine weeks from the start date.

- F. Upon completion of the soil sampling, analysis, and decontamination, as necessary, we will secure the report of an independent California-registered engineer to certify that the site has been closed in accordance with the specifications of the closure plan (Section 67215, Title 22, CCR).

This should complete the closure requirements in accordance with Sections 67212-67215 of the California Code of Regulations, Title 22. We will expect your review of this plan and comments and/or approval in order to allow for an expedient conclusion to this matter. Please do not hesitate to call should you have questions requiring additional information.

Sincerely,



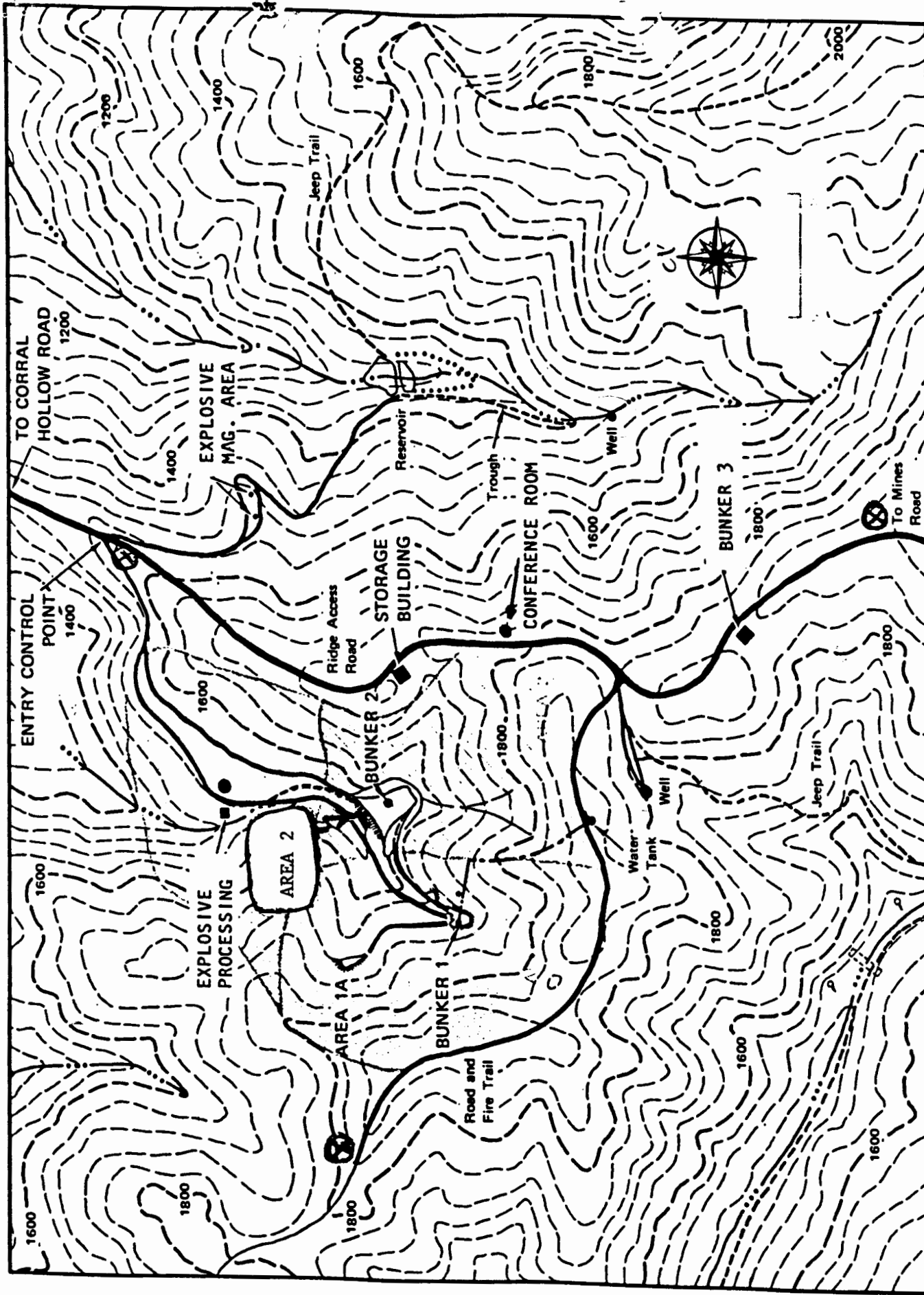
Sherry J. Hanen
Director, Health and Safety

Attachments: Cyclotrimethylene trinitramine, Hazardous Component Safety Data Sheet
Map of Area 2 with sample locations marked

cc: Sarah Picker
Toxic Substances Control Program
Region 2
700 Heinz Avenue, Bldg. F
Berkeley, CA 94710



CORRAL HOLLOW EXPERIMENTAL SITE



MAP OF AREA 2 SOIL SAMPLING LOCATIONS